

Patent Claims

1. An instrument set for fitting an intervertebral prosthesis, comprising a guide device (4, 34) which is to be arranged on the vertebral bodies (2) and is used for guiding a tool (21, 39, 40), and an adjustment instrument (10, 30) which is used for adjusting the guide device (4, 34) and which has a part (11) to be fitted into the intervertebral space (1) and with a projecting adjustment rod (12, 32) cooperating with the guide device (4, 34), wherein the part to be fitted into the intervertebral space (1) is an intervertebral plate which has at least one X-ray marker (12, 32) extending in the A P direction for positioning it in the intervertebral space (1).
2. The instrument set as claimed in claim 1, wherein the surface area of the intervertebral plate (11) is slightly smaller than the surface area of the intervertebral space.
3. The instrument set as claimed in claim 1, wherein the intervertebral plate (11) also has a transversely extending X-ray marker (13).
4. The instrument set as claimed in claim 1 or 2, wherein at least one X-ray marker is formed by a bore (13, 14).
5. The instrument set as claimed in claim 1, wherein the guide device (4) is designed to be secured to both vertebral bodies (2) to be connected by the intervertebral prosthesis and has an opening (6) which is larger than the intervertebral plate (11).
6. The instrument set as claimed in claim 5, wherein an

intermediate adjustment piece (18) is provided which can be applied to the guide device (4) and is displaceable on the adjustment rod (12).

- 5 7. The instrument set as claimed in claim 5, wherein a gauge (3) for a machining tool is provided, which gauge (3) can be applied to the guide device (4).
- 10 8. A method for implanting an intervertebral prosthesis, wherein, in a first step, the intervertebral disk is removed, in a second step an intervertebral plate having a surface area slightly smaller than the surface area of the intervertebral space and having at least one X-ray marker is introduced under X-ray control into the intervertebral space and positioned, in a third step a guide device is applied to an adjustment rod projecting in the ventral direction from the intervertebral plate and is applied against the vertebral bodies, in a further step the vertebral bodies are worked with the aid of the guide device, and, finally, the intervertebral prosthesis is fitted.
- 15 9. An instrument set for fitting an intervertebral prosthesis into an intervertebral space (1) between two vertebral bodies (2), which instrument set comprises a guide device (4, 34) for guiding at least one tool (21, 39, 40) for working a vertebral body (2), and an adjustment instrument (10, 30) which is used for adjusting the guide device (4, 34) and which has an intervertebral plate (11) to be fitted into the intervertebral space (1) and, projecting from this plate, an adjustment rod (12, 32) cooperating with the guide device (4, 34), wherein the intervertebral plate (11) or the adjustment rod (12, 32) has a marking detectable in an AP X-ray beam path.
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10. The instrument as claimed in claim 9, wherein the surface of the intervertebral plate (11) is designed so that it is displaceable in the transverse direction and positionable in the intervertebral space (1) under X-ray control.
11. The instrument as claimed in claim 9, wherein the intervertebral plate (11) has an X-ray marker (13) detectable in a latero-medial beam path.
12. The instrument set as claimed in claim 9, wherein the guide device (34) can be pushed onto the adjustment rod (32) from the free end thereof, and the adjustment rod (32) and the guide device (34) have interacting surfaces (31, 35) shaped so as to complement one another to give a non-rotational fit, the guide device (34) defining a drill gauge for two drill axes (37, 28) arranged in parallel in the median plane above and below the adjustment rod.
13. The instrument set as claimed in claim 12, wherein two drill gauges are arranged on a hub surrounding the adjustment rod.
14. The instrument set as claimed in claim 12, wherein only one drill gauge (36) is arranged on a hub surrounding the adjustment rod (32), and the interacting surfaces (31, 35) of the hub and of the adjustment rod (32) fit together in two positions offset 180° in relation to one another.
15. The instrument set as claimed in claim 9, wherein the intervertebral plate (11) is wedge-shaped.
16. An instrument set for fitting an intervertebral prosthesis into an intervertebral space (1) between

two vertebral bodies (2), which instrument set comprises an adjustment device (34) consisting of an intervertebral plate (11) positionable in the intervertebral space (1) and of an adjustment rod (32) projecting from the intervertebral plate (11), and a guide device (34) having a hub which can be pushed onto the adjustment rod (32) and which cooperates with the adjustment rod (32) via complementary surfaces (31, 35) shaped to give a non-rotational fit, wherein the guide device (34) defines two guide axes (37, 38) located in the median plane below and above the adjustment rod and extending parallel to the latter.

17. The instrument as claimed in claim 16, wherein the guide device (34) has a drill gauge (36) and the complementary interacting surfaces (31, 35) of the adjustment rod (32) and of the hub fit together in positions offset 180° in relation to one another.

18. An instrument set for fitting an intervertebral prosthesis in an intervertebral space (1) between two vertebral bodies (2), which comprises

- a) an adjustment device (30) consisting of an intervertebral plate (11) and of an adjustment rod (32) projecting from the latter,
- b) a guide device (34) which is supported loosely by the adjustment rod (32) and which forms two guide axes (37, 38) lying in the median plane below and above the adjustment rod (32) and parallel to the latter, these axes being intended for a cylindrical turning instrument (39, 40),
- c) two pins (41) which can be introduced into the vertebral bodies (2) parallel to one another by means of the turning instrument (39, 40), and
- d) a spreader instrument (42, 43, 44) holding the pins (41) parallel.

19. A method for fitting an intervertebral prosthesis into the intervertebral space between two vertebral bodies, wherein, in a first step, the intervertebral disk is removed, in a second step the intervertebral plate of an adjustment instrument is positioned in the intervertebral space and secured therein, in a third step the hub of a guide device is pushed onto an adjustment rod, projecting from the intervertebral plate, in such a way that it defines two guide axes in the median plane above and below the adjustment rod and parallel thereto, in a fourth step two pins are introduced into the vertebrae in the direction of the guide axes, in a fifth step a distraction forceps is connected to the pins so that they are held parallel to one another, and in further steps the spacing of the intervertebral bodies is set, the guide device and the adjustment element are removed, the intervertebral space is worked, if so desired, and the intervertebral prosthesis is fitted.
20. An instrument set for fitting an intervertebral prosthesis into the intervertebral space between two vertebral bodies, which instrument set comprises cutting tools for shaping the intervertebral space so that it matches the shape of the prosthesis, wherein a set of rasps is assigned to each prosthesis shape, the largest rasp being essentially the same as the prosthesis shape and the other rasps being smaller in stages than the largest one.